



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,736	07/14/2003	Jin-Soo Park	P23931	3630
7055	7590	10/13/2004	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			NGUYEN, HANH N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 10/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/617,736

Applicant(s)

PARK ET AL.

Examiner

Nguyen N Hanh

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 19-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I (claims 1-18) in the reply filed on 9/30/2004 is acknowledged. The traversal is on the ground(s) that "there would be no serious burden on the Examiner to examine all the claims of the present invention". This is not found persuasive because these inventions of Group I and Group II are distinct and have acquired a separate status in the art as shown by their different classification.

Therefore, the requirement is still deemed proper and is made FINAL.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a space therein so that the guide portion can be inserted" in claim 8, "a penetrating hole" in claim 9, "a winding recess" in claim 10, "the outer wing is formed to have the same height as that of the yoke" in claim 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 and 6-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara in view of Suzuki et al. and further in view of Sun.

Regarding claim 1, Fujiwara shows a stator assembly of a motor comprising: a plurality of yokes (15 in Figs. 1 and 2) fabricated by laminating a plurality of steel plate sheets having predetermined length; and a plurality of poles (9) coupled between the yokes. Fujiwara fails to show the poles are fabricated by molding magnetic material using a mold, and a plurality of bobbin bodies, on which coil magnetism is wound, covered on outer portions of the poles for generating induced magnetism is wound, covered on outer portions of the poles

However, Suzuki et al. disclose a motor wherein the poles (34 in Fig. 3B) are fabricated by molding magnetic material using a mold for the purpose of reducing Eddy current loss (Col. 4, lines 45-59).

Moreover, Sun discloses a motor including and a plurality of bobbin bodies (216a and 216b), on which coil magnetism is wound, covered on outer portions of the poles for generating induced magnetism is wound, covered on outer portions of the poles for the purpose of preventing electric short circuit.

Since Fujiwara, Suzuki et al. and Sun are in the same field of endeavor, the purpose disclosed by Suzuki et al. and Sun would have been recognized in the pertinent art of Fujiwara.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Fujiwara by as taught by using the poles are fabricated by molding magnetic material using a mold, and a plurality of bobbin bodies, on which coil magnetism is wound, covered on outer portions of the poles for generating induced magnetism is wound, covered on outer portions of the poles for the purposes discussed above.

Regarding claim 2, Fujiwara also shows a stator assembly of a motor wherein the pole comprises: a guide portion of circular arc shape for gathering magnetic flux; a neck portion, on which the bobbin body is mounted, connected to a rear surface of the guide portion; and a connecting portion formed on a rear surface of the neck portion and coupled to the yoke.

Regarding claim 3, Suzuki et al. also show a stator assembly of a motor wherein the pole is molded by using iron powder (Col. 4, lines 49-50).

Regarding claim 4, Fujiwara also shows a stator assembly of a motor wherein the guide portion having an inner surface of a circular arc shape which guides a rotor to gather the magnetic flux onto the rotor (Fig. 2).

Regarding claim 6, Fujiwara also shows a stator assembly of a motor wherein the connecting portion is formed to have a circular arc shape having predetermined height and width, and to have connecting grooves on both sides thereof (Fig. 4).

Regarding claim 7, Sun also shows a stator assembly of a motor wherein the bobbin body comprises: an inner wing attached on outer portion of the guide portion on the pole; a body connected to the inner wing and mounted on the neck portion of the pole to be wound by the coil; and an outer wing protruded toward each side of the body to cover the coil (Fig. 4).

Regarding claim 8, Sun also shows a stator assembly of a motor wherein the inner wing is formed to be a circular arc shape similarly to the guide portion and formed to have a space therein so that the guide portion can be inserted (Fig. 4).

Regarding claim 9, Sun also shows a stator assembly of a motor wherein the body includes a penetrating hole having same shape as that of the neck portion on inner side thereof so that the neck portion can be inserted therein, and a coil generating induced magnetism wound predetermined times on outer side thereof (Fig. 4).

Regarding claim 10, Sun also shows a stator assembly of a motor wherein the body includes a winding recess so that the coil can be wound on outer part thereof (Fig. 4).

Regarding claim 11, Sun also shows a stator assembly of a motor wherein the outer wing is protruded toward each side of the body in a circumferential surface for insulating between the coil and the yoke and is formed to have same height as that of the yoke (Fig. 9).

Regarding claim 12, Sun also shows a stator assembly of a motor wherein the bobbin body is formed by using insulating material for insulating the coil from the pole (inherent).

Regarding claim 13, the structure disclosed by Fujiwara, modified by Suzuki et al. and shows all limitations of the claimed invention except showing the insulating material is epoxy.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to use epoxy as an insulating material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 14, Fujiwara also shows a stator assembly of a motor wherein the yoke is formed by laminating a plurality of yoke plates coupled between two different connection portions and having a predetermined radius of curvature (Fig.4) therein as high as the height of connecting portion (inherent).

Regarding claim 15, Fujiwara also shows a stator assembly of a motor wherein a connecting projection and a connecting groove for coupling the yoke and the connecting portion are formed between the yoke and the connecting portion as high as the height of the yoke and the connecting portion (inherent).

Regarding claim 16, Fujiwara also shows a stator assembly of a motor wherein the connecting projection (32 in Fig. 7) is protruded as a square shape to be coupled to the connecting groove (24) of the connecting portion hollowed as a square shape so as not to separate the yoke from the connecting portion.

Regarding claims 17 and 18, the structure disclosed by Fujiwara, modified by Suzuki et al. and Sun shows all limitations of the claimed invention except showing the connecting projection is formed to be long and has stopping jaws of and to be coupled to stopping grooves of the connecting portion having the shape corresponding to the stopping jaws (or a stepped projections of square shape coupled to stepped projection of square shape on both ends of the connecting portion as in claim 18). It would have been an obvious matter of design choice to form the connecting projection is formed to be long and has stopping and to be coupled to stopping grooves of the connecting portion having the shape corresponding to the stopping jaws (or form a stepped projections of square shape coupled to stepped projection of square shape on both ends of the connecting portion as in claim 18), since such modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).



4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara in view of Suzuki et al. and Sun and further in view of Hallerback.

Regarding claim 5, the structure disclosed by Fujiwara, modified by Suzuki et al. and Sun shows all limitations of the claimed invention except showing the assembly wherein the neck portion has a shorter length and lower height than those of the guide portion so as to be inserted into the bobbin body.

However, Hallerback discloses the assembly wherein the neck portion has a shorter length and lower height than those of the guide portion so as to be inserted into the bobbin body (Fig. 7) for the purpose of accommodating the stator winding.

Since Fujiwara, Suzuki et al., Sun and Hallerback are in the same field of endeavor, the purpose disclosed by Hallerback would have been recognized in the pertinent art of Fujiwara, Suzuki et al. and Sun.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Fujiwara, Suzuki et al. and Sun by as taught by forming the neck portion has a shorter length and lower height than those of the guide portion so as to be inserted into the bobbin body for the purpose of accommodating the stator winding.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.

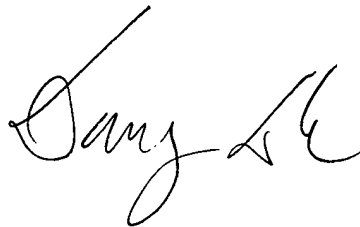
Art Unit: 2834

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberger, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

October 9, 2004

A handwritten signature in black ink, appearing to read 'Dang Le', with a stylized, cursive script.

**DANG LE**  
**PRIMARY EXAMINER**